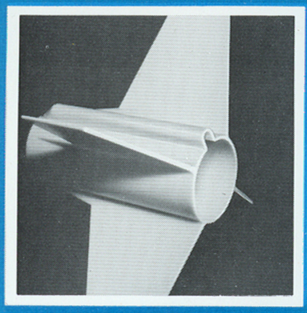
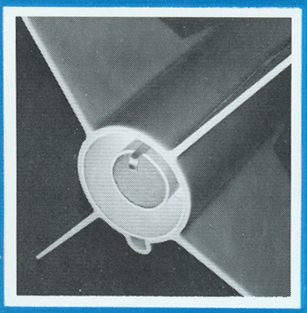
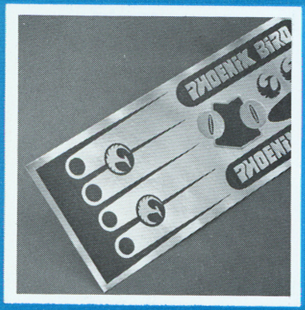
#081643

Centuri


PRECISION FIN UNIT
BUILT-IN LAUNCH LUG


STURDY ENGINE MOUNT
AND ENGINE LOCK

MOLDED NOSE CONE
AND CONNECTOR



HUGE CHROME & RED
STICK-ON "DECALS"

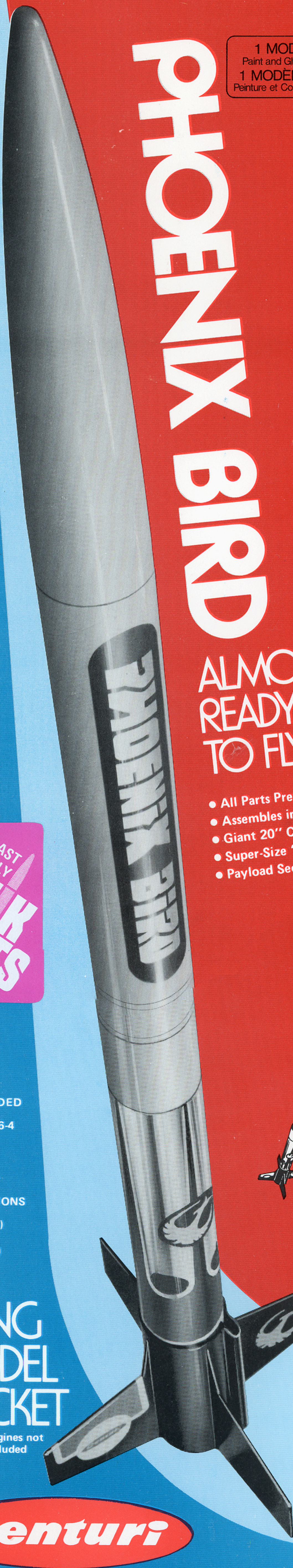
OVER TWO FEET LONG
. . . IMPRESSIVE!

The Centuri PHOENIX BIRD is named after the Phoenix from Egyptian mythology. Legend has it that the Phoenix renewed itself every five centuries; being born again from fire. The Centuri PHOENIX BIRD also "renews" itself . . . its sturdy construction allows it to be flown again and again.

This kit's precision-molded fin unit and nose cone create very little aerodynamic drag. The streamlined design provides impressive high-altitude flights, and the super-fast assembly technique makes it ideal for demonstration launches.

1 MODEL KIT
Paint and Glue not included.
1 MODÈLE RÉDUIT
Peinture et Colle non comprises.

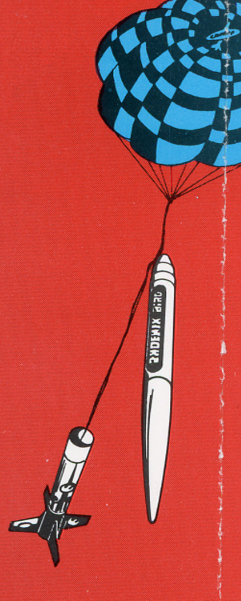
PHOENIX BIRD



ALMOST READY TO FLY

- All Parts Pre-Colored
- Assembles in One Hour
- Giant 20" Chute
- Super-Size "Decals"
- Payload Section

FAST ASSEMBLY
KWIK KITS



RECOMMENDED ENGINES
A8-3 B4-4 B6-4
B14-5 C6-5

ALTITUDES
150 to 800 ft.

SPECIFICATIONS
Body Diam.
1.34" (3.4cm)
Span
5.8" (14.7cm)
Net Wt.
3.4oz (96.4g)

FLYING MODEL ROCKET KIT

Engines not included

Centuri

RECOMMENDED AGES: 10 TO ADULT
ASSEMBLED LENGTH: 26.3" (66.8cm)

#5407

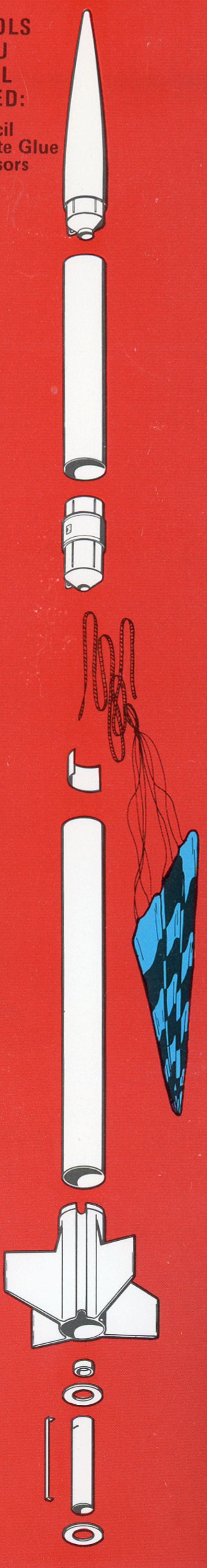
Made in U.S.A.
Centuri Engineering Co., Inc.
Phoenix, Arizona 85001

Centuri

FEATURES:
"Customer Convenience"

NO MEASURING
NO PAINTING
BUILT-IN COLORS
LOTS OF "DECALS"
PAYLOAD SECTION

TOOLS YOU WILL NEED:
Pencil
White Glue
Scissors



SKILL LEVEL

1	2	3	4	5
Beginner		Intermediate		Advanced

FLY IT AGAIN & AGAIN

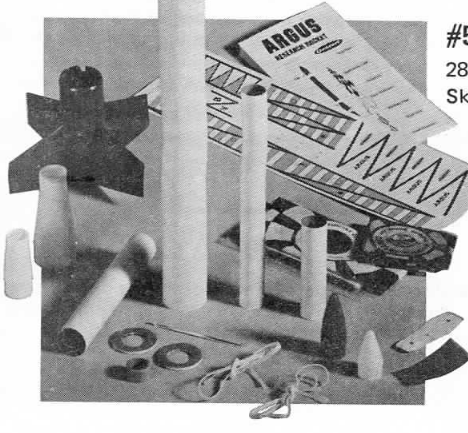
KWIK KITS

Centuri

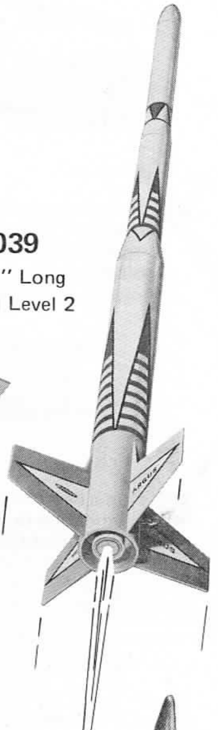
- SUPER FAST ASSEMBLY
- ALL PARTS PRE-COLORED
- NO SAND'N SEAL REQUIRED
- NO PAINT REQUIRED
- READY TO FLY IN ONE HOUR
- MOLDED FIN UNIT
- WHITE BODY TUBES
- STICK-ON DECALS
- PLASTIC PARTS
- EASY INSTRUCTIONS

HAVE YOU TRIED THESE?

Argus RESEARCH ROCKET



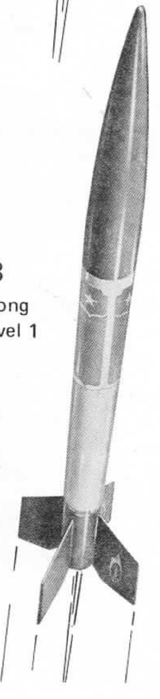
#5039
28.5" Long
Skill Level 2



Screaming Eagle HIGH ALTITUDE "BIRD"

Screaming Eagle
MODEL ROCKET MINI-MANUAL

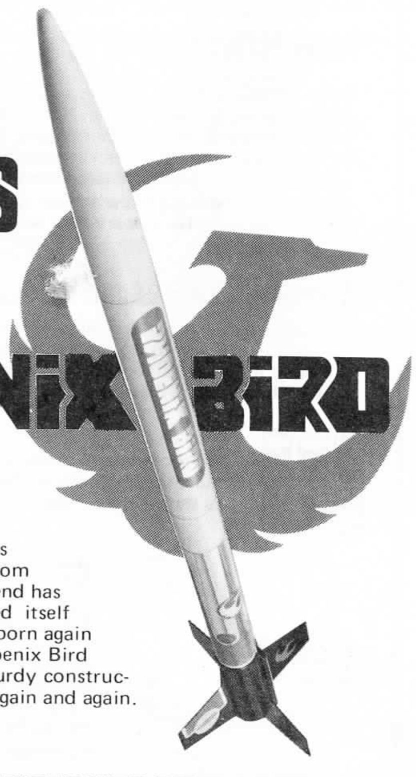
#5173
16.4" Long
Skill Level 1



Centuri

KWIK KITS

PHOENIX BIRD



PROD. NO. 5407

The Centuri Phoenix Bird is named after the Phoenix from Egyptian mythology. Legend has it that the Phoenix renewed itself every five centuries; being born again from fire. The Centuri Phoenix Bird also "renews" itself. Its sturdy construction allows it to be flown again and again.

MODEL ROCKETEER'S SAFETY CODE

CONSTRUCTION

My model rockets will be made of only lightweight materials such as paper, wood, plastic, and thin metallic foils, with the exception of payloads and engine holders made of wirelike material.

ENGINES

I will use only pre-loaded factory made model rocket engines in the manner recommended by the manufacturer. I will not change in any way nor attempt to reload these engines.

RECOVERY

I will always use a recovery system in my model rockets that will return them safely to the ground so that they may be flown again.

WEIGHT LIMITS

My model rocket will weigh no more than 453 grams (16 oz.) at liftoff, and the engines will contain no more than 113 (4 oz.) of propellant, as prescribed by Federal Regulations.

STABILITY

I will check the stability of my model rockets before their first flight except when launching models of already proven stability.

LAUNCHING SYSTEM

The system I use to launch my rockets will be remotely controlled and electrically operated, and will contain a switch that will return to "off" when released. I will remain at least 10 feet away from any rocket that is being launched.

LAUNCH SAFETY

I will not let anyone approach a model rocket on a launcher until I have made sure that either the safety interlock key has been removed or the battery has been disconnected from my launcher.

LAUNCH AREA

My model rockets will always be launched from a cleared area, free of any easy-to-burn materials, and I will only use non-flammable recovery wadding in my rockets.

BLAST DEFLECTOR

My launcher will have a blast deflector device to prevent the engine exhaust from hitting the ground directly.

LAUNCH ROD

To prevent accidental eye injury I will always place the launcher so the end of the rod is above eye level or cap the end of the rod with my hand when approaching it. I will never place my head or body over the launching rod. When my launcher is not in use I will always store it so that the launch rod is not in an upright position.

POWER LINES

I will never attempt to recover my rocket from a power line or other dangerous places.

LAUNCH TARGETS AND ANGLE

I will not launch rockets so their flight path will carry them against targets on the ground, and will never use an explosive warhead nor a payload that is intended to be flammable. My launching device will always be pointed within 30 degrees of vertical.

PRE-LAUNCH TEST

When conducting research activities with unproven designs or methods, I will, when possible, determine their reliability through pre-launch tests. I will conduct launchings of unproven designs in complete isolation from persons not participating in the actual launching.

FLYING CONDITIONS

I will not launch my model rocket in high winds, near buildings, power lines, tall trees, low flying aircraft or under any conditions which might be dangerous to people or property.

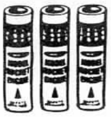
CENTURI Engineering Co., Inc., Phoenix, AZ 85001
Printed in U.S.A.

HOW IT WORKS

Your "Phoenix Bird" model rocket is designed to fly in the same manner as most model rocket kits. The electrically ignited engine blasts the rocket off the launch pad, guiding it into proper flight by the launch rod. The rocket continues coasting to peak altitude while the engine's delay-charge burns. Then the ejection charge ignites, pushing out the parachute system. The "Phoenix Bird" drifts to earth to be prepared for another flight.

WHAT IT TAKES TO FLY

You will need engines, igniters, an electrical launch system and parachute wadding to fly your rocket. These supplies are NOT included in individual rocket kits, but are available separately and ARE included in every Centuri Starter Set or Rocket Outfit.



We recommend using Centuri engines; each package includes the famous "Sure-Shot" igniters, acclaimed as the world's most reliable model rocket igniter.

The popular Centuri "Powr-Pad" is an ideal basic launch system; compact, highly portable, reliable, and offering features not found in any other launch system.

Always use standard remote-control electrical ignition and follow the engine recommendations. Be sure to comply with any laws that may apply in your area, for the good of Model Rocketry and your own enjoyment.

RIGHT MATERIALS FOR THE JOB

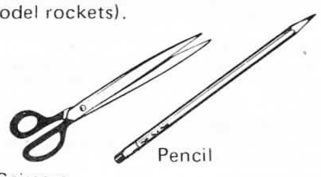
Different model rocket kits are made out of a wide variety of materials, depending on the needs of each kit. The chart below explains why this particular kit is designed using certain materials.

PART	REQUIREMENT	MATERIAL
Fins	• No tools required • Pre-Colored	Injection-molded plastic
Decals	• No cutting required • No water required	Pre-cut pressure-sensitive
Nose Cone	• Extreme Lengh • Pre-Colored	Blow-molded plastic

TOOLS YOU WILL NEED

In addition to the parts supplied you will need the following tools to assemble and finish this kit (DO NOT use model airplane glue for building model rockets).

White glue, or "Wilhold" type glue, or Centuri Superbond.

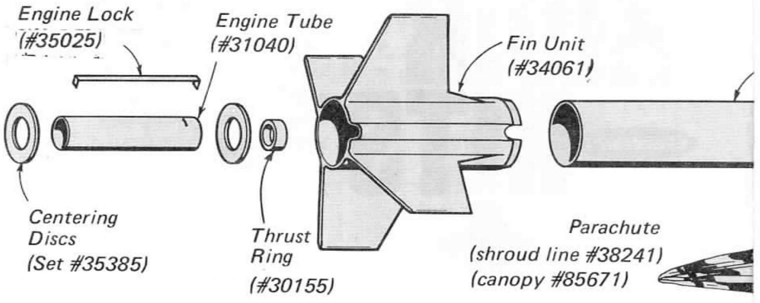


BEFORE YOU START

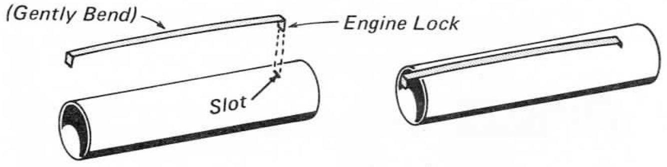
In case you are new to model rocketry, here are some general tips to get you off to a good start.

- Choose a practical assembly area: well lighted, big enough to work in, and out of the way of relatives or pets who might accidentally mess up your work.
- Cover your worktable with plywood or heavy cardboard to protect the table from glue, paint, cuts, etc.
- Remove the entire contents of your kit package carefully to avoid losing or damaging small parts. Lay them out neatly and identify each by refering to the "exploded view" drawing on this instruction.
- NOTE: Sometimes certain parts are packed INSIDE of other parts, such as tape discs inside parachutes, decals or couplers inside body tubes, etc.

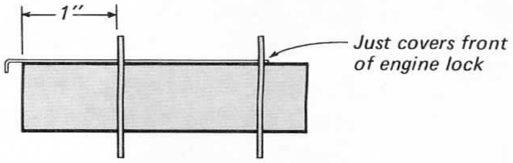
ASSEMBLY INSTRUCTIONS READ CA



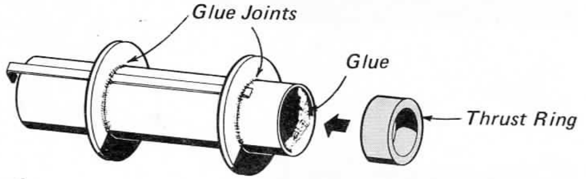
1 Bend the engine lock into a slightly curved shape. Now insert one end of the lock into the engine tube slot.



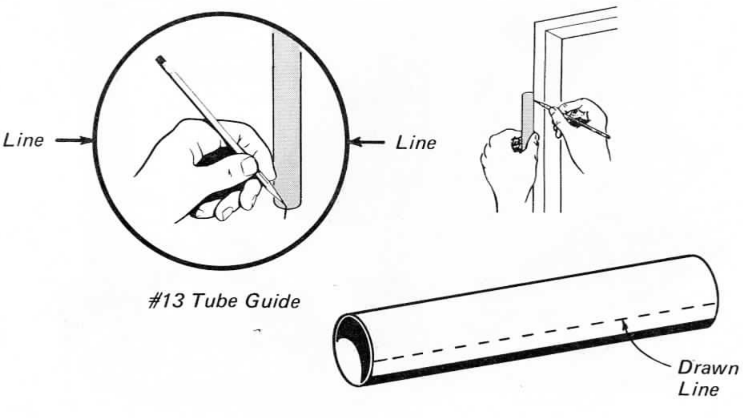
2 Slide the two centering discs onto the engine tube to the approximate positions shown. NOTE: This type disc is strong so that the engine mount does not require the coupler tube found in engine mounts of other kits.



3 Run a bead of glue around both sides of each centering disc and engine tube joint. Apply glue just inside the front of engine mount, insert thrust ring. Set the engine mount aside to dry.



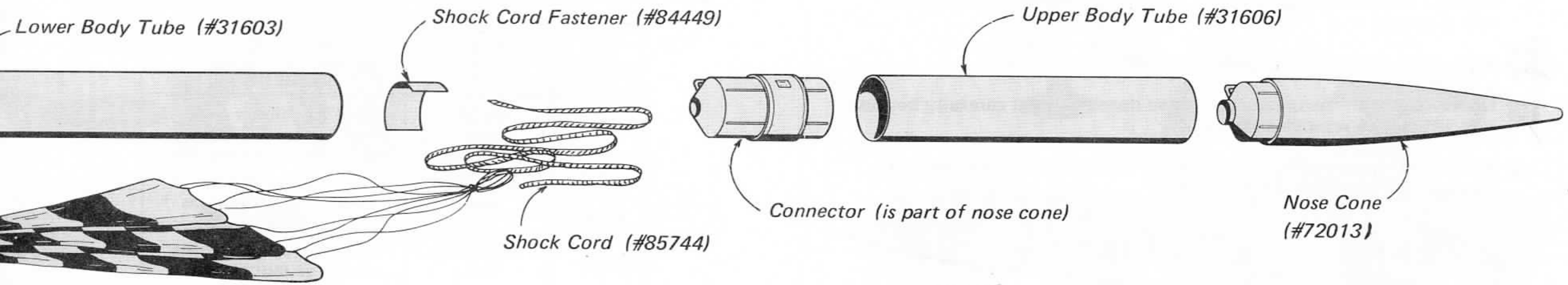
4 Stand the shorter body tube on the guide to mark line locations. Find a convenient channel or groove, such as a door jamb, partially open drawer, or molding. Extend the marks lightly the full length of the tube, using a pencil. Repeat with the longer tube, but only draw one line this time.



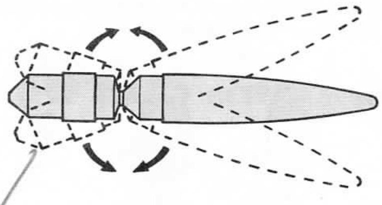
REFULLY BEFORE STARTING ASSEMBLY

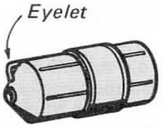
Enclosed in kit, but not shown:

Stick-On Decals (#36627, $1.00 ea.)
Tape Discs (#38408)
Mini-Manual (#81915)
Sandpaper (#86598)

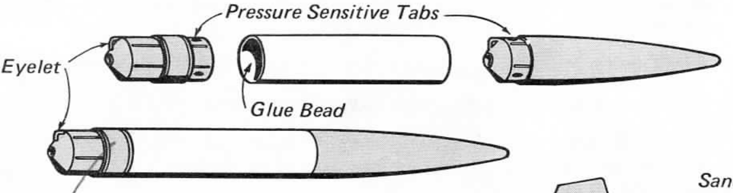

Lower Body Tube (#31603)
Shock Cord Fastener (#84449)
Upper Body Tube (#31606)
Shock Cord (#85744)
Connector (is part of nose cone)
Nose Cone (#72013)

5 Wiggle the nose cone/connector piece until it breaks apart at the neck. Scrape away any plastic "flash" along the seams. Be sure that the eyelet in the connector piece is open.



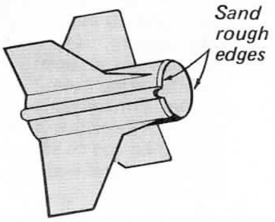


6 Use two of the small pressure-sensitive tabs (the same type as used in parachute assembly) on the base of the nose cone. Also place two tabs on the neck of the connector. Run a bead of glue around the inside of one end of the short body tube and insert the connector. Now socket the nose cone in place.

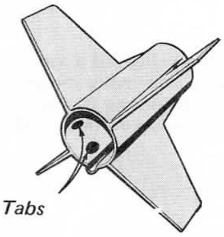

Pressure Sensitive Tabs
Eyelet
Glue Bead

Be sure eyelet is showing and not inside tube.

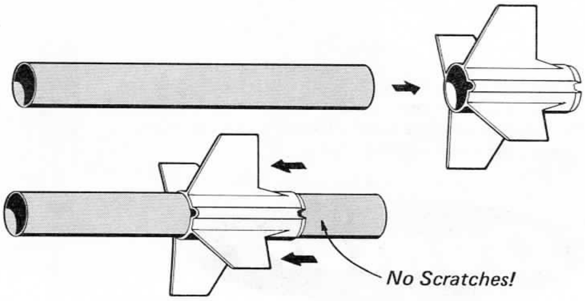
7 Prepare the fin unit before sliding it down over the lower-body tube. Use the enclosed sandpaper to smooth the inside front edge of the plastic fin unit.


Sand rough edges

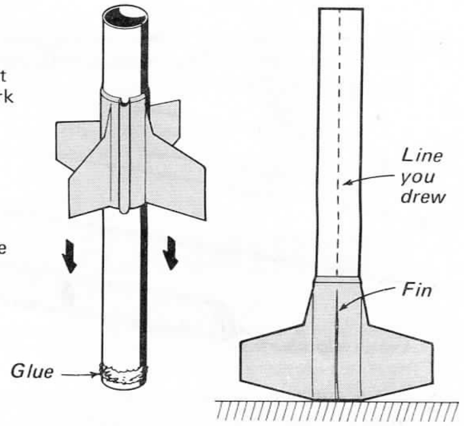
8 Apply four pressure-sensitive tabs inside the rear part of the fin unit.



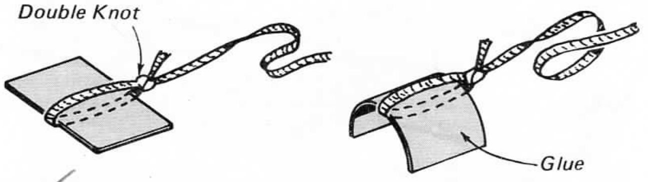
9 Push the lower body tube carefully into the rear of the fin unit. Watch the body tube as it emerges from the front . . . if there are scratches on it, remove fin unit and sand its edge more.


No Scratches!

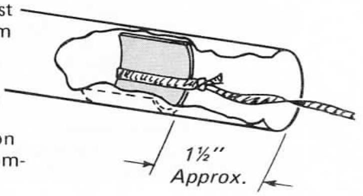
10 Run beads of glue around the bottom few inches of the tube. Stand the unit upright on your work table and push the fin unit all the way down with a firm, even motion, being sure that one fin is lined up with the pencil line you made on the tube in step four. Wipe away excess glue.


Line you drew
Fin
Glue

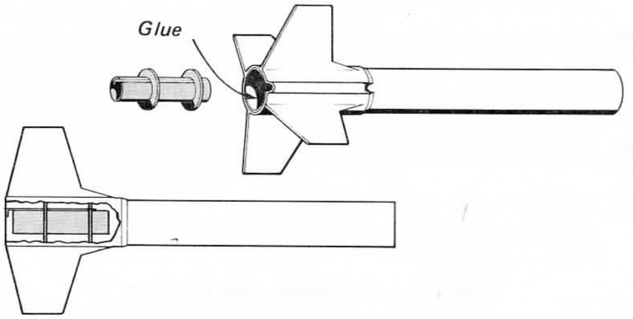
11 Tie one end of the shock cord around the heavy paper shock cord fastener (½"x1"). Bend it neatly into half-circle and apply glue to the entire outside surface.


Double Knot
Glue

12 Insert the assembly into the main body tube. Make sure it's at least 1½" into the tube to allow room for the connector to be inserted later. Rub the fastener down firmly with eraser end of pencil, and hold until dry. Tuck cord inside and socket the nose section in place (chute rigging will be completed later).



13 Run several generous glue beads around the inside lower end of the rocket. Push the engine mount up into the rocket until none of the engine mount sticks out past the rear of the rocket. Stand rocket upright to allow glue to dry.



forget 14

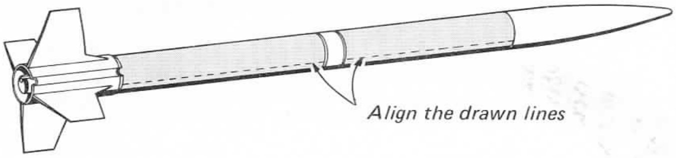
OPTIONAL STEP

14 The Phoenix Bird does not need to be painted, because all parts are pre-colored. However, you may wish to paint the rocket to give the body tubes greater protection from stains and weather . . . or simply to change the color scheme. If you prefer to paint the plastic parts, we recommend using spray enamel. Never use dope or lacquer when painting plastic! We suggest that you avoid painting the fin unit (by taping a plastic or paper bag over it) as paint may chip off the flexible surfaces.

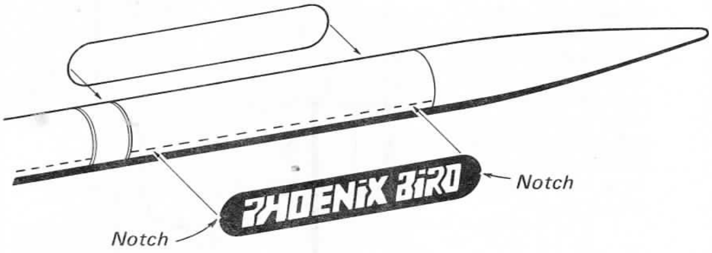
15 Wash your hands before applying the stick-ons.

16 Note: Apply all the pressure-sensitive decal material carefully because it is difficult to remove and reapply.

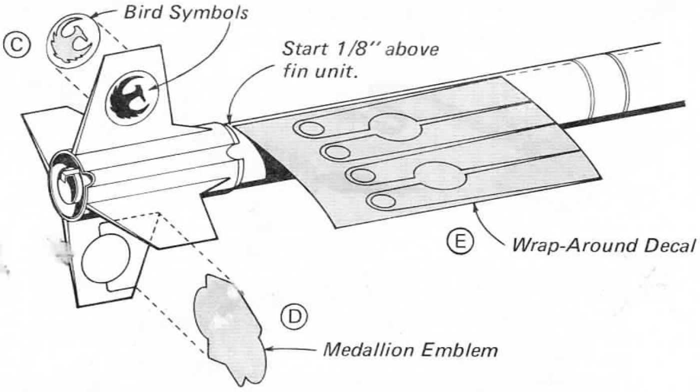
A Adjust both tubes of your rocket until the lines you drew (in step four) on the body tubes line up.



B Using the little notches in their ends as positioning guides. Center the "Phoenix Bird" name decals directly over the lines you drew on the short body tube.



C Remove the two red bird symbols from the sheet and place each of them on opposite sides of the same tail fin. This fin should be the one which lines up with the line you drew on the long body tube in step four.



D Apply medallion emblem on the fin opposite the one with the bird symbol. Center the emblem along the fin's leading edge. Press down on both sides until it is in place.

E Be very careful on this step! Line edge of large wrap-around decal up with pencil line drawn on the long body tube. Press decal down evenly and slowly with care so that it lays flat all the way around the tube and meets its own other edge neatly.

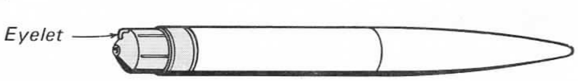
One good trick is to lay the wrap-around down on your work table, sticky side up, and roll the tube onto it.

17 [illegible] ALL STICK-ONS TO BE SURE THEY WON'T PEEL OFF!

Note that there is a Centuri "logo" decal left on your sheet . . . this is a bonus decal, to put on anything you care to!

18 Assemble the parachute by following the directions printed on it.

19 Tie loose end of rubber shock cord to eyelet in connector.



YOUR "PHOENIX BIRD" IS NOW COMPLETE

ENGINES

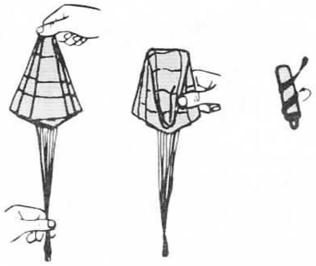
Igniter and complete engine installation instructions are included in "Engine Operating Instructions" which accompany all Centuri Model rocket engines.

The PHOENIX BIRD can be launched with the following engines:

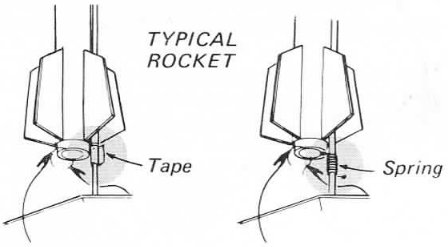
RECOMMENDED ENGINES		
TYPE	ALTITUDE	PURPOSE
A8-3	100-200 feet	First for flights and small launch areas.
B4-4 B6-4 B14-5	250-450 feet	For general flying and medium launch areas.
C6-5	600-800 feet	Extremely high flights and large launch areas.

FLIGHT PREPPING

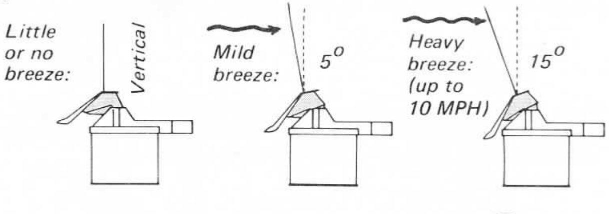
1. Inspect entire recovery system for good condition before each flight. If the recovery system is tangled from the last flight, cut it apart to untangle it.
2. Insert flameproof chute wadding to protect your parachute from being melted by the engine's ejection charge. We recommend using 4 sheets of Centuri crepe wadding (#5846/SPW-19).
3. Fold parachute as shown and tuck neatly into rocket . . . trying to avoid tangles. Chute should be packed just before flight to avoid sticking together.



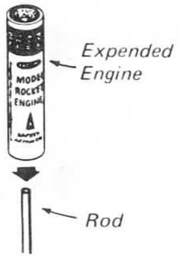
4. Tuck in shock cord and insert tube and connector. The whole unit should fit snugly, yet be loose enough to eject.
5. Install igniter into engine, following instructions enclosed with engines.
6. Insert engine into its mount, securing with engine lock.
7. Mount the rocket on launcher and prepare for ignition. The rocket must be raised slightly off the launcher's deflector to avoid a short-circuit which might prevent ignition. If your launcher has a "positioning spring" use it as shown. Otherwise just wrap a little tape around the launch rod to support the rocket and the launch lug.



8. If your launcher has a rod-tilting feature, use it only for launching in breezes . . . normally model rockets are launched straight up. For reliable, impressive flights, never tilt the rod more than 15 degrees when flying your Phoenix Bird . . . do not tilt the rod to its maximum angle.



Avoid eye injury by capping the exposed tip of the launch rod when not actually launching. Follow the instructions and the Safety Code, and have many happy hours with model Rocketry.



THE QUALITY LEADER IN HIGH FLYING MODEL ROCKETS

Centuri